

REMARKS

Applicants respectfully traverse the rejections and request reconsideration. The undersigned would like to thank the Examiner for the Examiner interview on December 21, 2004. As agreed during the interview, the inherent language added by amendment to claim 2 presented in this response overcomes the § 112 rejection. Accordingly, although claim 2 recites “wherein the switchable voltage supply circuit is coupled to an input/output pad supply voltage,” claim 2 is amended so that the switchable voltage supply circuit is coupled to “at least” an input/output pad supply voltage as was inherent in the original claim language. Claims 1, 2, 4, 6 through 10, 12 through 16 and 18 through 22 are pending. Applicants also wish to thank the Examiner for allowing claim 22 and for the indication that claims 6, 7, 9, 12, 13, 19, 20, 21, 23 and 29 would be allowable if rewritten in independent form.

Claim Rejection Under 35 U.S.C. § 112

Claim 2 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Amended claim 2 recites, among other things, the switchable voltage supply circuit is coupled to at least an input/output pad supply voltage. As agreed during the Examiner’s interview referenced above, the inherent language added by the amendments presented in this response overcomes the current rejection. For example, although claim 2 previously recited that “the switchable voltage supply circuit is coupled to an input/output pad supply voltage,” claim 2 is amended so that the switchable voltage supply circuit is coupled to at least an input/output pad supply voltage as was inherent in the original language of claim 2. Therefore, for at least the reasons provided below, the language in claim 2 is not indefinite. With regard to dependent claim 23, Applicants also submit that claim 23 depends on claim 2 and provides further patentable subject matter in view thereof. Further, it is submitted that this claim is allowable, not merely as being dependent upon an allowable base claim, but rather as containing patentable subject matter in view of the prior art of record. Therefore, reconsideration and withdrawal of the present rejections are respectfully requested.

The Office Action also asserts that Figs. 2 and 3 do not show “the switchable voltage supply circuit is coupled to an I/O pad supply voltage and selects the differential receiver supply voltage that is a higher voltage than the I/O pad supply voltage.” As agreed during the Examiner

interview, Fig. 2 shows, for example, that the switchable voltage circuit 104 may switch between several different voltages (e.g., 3.3 V, 1.5 V, 2.5 V) to provide the differential receiver supply voltage 116 to the single gate oxide differential receiver 102. (Specification p. 4, lines 11–18; p. 5, lines 24–30; p. 6, lines 1-23; Fig. 2.) The switchable voltage supply circuit 104 receives, among other things, a variable I/O pad supply voltage 108 which may be a plurality of different supply voltages. (Specification p. 4, line 31 through p. 5, line 2.) For example, the I/O pad supply voltage 108 may be 3.3 volts or 1.5 volts. (Specification p. 5, lines 2–3, Fig. 2.) The switchable voltage supply circuit 104 also receives another input supply voltage such as a reference supply voltage 110, which may be, for example, the supply voltage for the core logic, such as 2.5 volts or other suitable reference voltage. (Specification p. 5, lines 3–6, Fig. 2.)

For example, if the desired I/O pad supply voltage 108 is 1.5 volts and the input voltage 114 range is zero to 1.5 volts, the switchable voltage supply circuit 104 selects the reference supply voltage 110 of 2.5 volts. Therefore, according to at least this embodiment, the switchable voltage supply circuit 104 may provide a differential receiver supply voltage 116 (such as 2.5 volts) that is a higher voltage than the I/O pad supply voltage (e.g., 1.5 volts). Both the I/O pad supply voltage 108 of 1.5 volts and the reference supply voltage 110 of 2.5 volts are shown as examples in Fig. 2 and are also described in the specification as cited above. For at least these reasons, Applicants assert that the claims are not indefinite and also, Figs. 2 and 3 shows the above cited claim language.

Claim Rejection Under 35 U.S.C. § 102(E)

Claim 1 stands rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,091,300 (Setty).

The Office Action equates the single gate oxide differential receiver with transistors M1 and M2, and the claimed received input voltage is equated to voltages V_{IP} and V_{IM} as shown in Figs. 3 and 4 of Setty. The claimed switchable voltage supply circuit is equated to V_{DD} external and V_{DD} internal depending on switch S_A . The Office Action also equates the claimed differential receiver supply voltage with V_{DD} internal of Setty as shown in Figs. 3 and 4. According to the Office Action, the input voltage is either at V_{IP} or V_{IM} and is set at a common-

mode voltage, which is V_{DD} minus the absolute value $|V_{GS}|$, rather than a maximum voltage level of the input voltage.

In contrast, the claims explicitly recite “a maximum voltage level of the input voltage.” The Office Action merely asserts that the input voltage is either V_{IP} or V_{IM} and is set at a common mode voltage which is V_{DD} minus the absolute value $|V_{GS}|$, rather than teach “a maximum voltage level of the input voltage” as claimed. Both the Office Action and Setty are silent with regard to teaching, among other things, “wherein at least one of the selected receivers’ supply voltages is higher than a maximum voltage level of the input voltage.” As discussed during the Examiner interview, Setty does not appear to limit V_{IP} or V_{IM} from exceeding V_{DD} or $V_{D(D-A)}$. For example, the current source I_{RDF} would even allow transistors M1 and M2 to remain on in this condition because the source voltages for transistors M1 and M2 would follow the input voltage. Therefore, since Setty fails to teach “wherein at least one of the selected receiver supply voltages is higher than a maximum voltage level of the input voltage,” Setty as cited fails to teach each and every element of claim 1. As a result, Setty as cited fails to anticipate the claims. Applicants submit that the rejection of claim 1 is improper. Accordingly, reconsideration of claim 1 is respectfully requested.

Claim Rejection Under 35 U.S.C. § 103(A)

Claims 4, 8, 10, 14 through 16 and 18 are rejected under 35 U.S.C. § 103(a) solely as being unpatentable over Setty. Applicants respectfully reassert the relevant remarks made above with respect to claim 1 and the relevant remarks made in previous responses to Office Actions. As previously stated above, rather than select the supply voltage based on “a maximum voltage level of the input line” as claimed, the Office Action merely asserts that Setty teaches a common mode voltage. Setty is silent with respect to the claimed “wherein the switchable voltage supply circuit selects the differential receiver supply voltage for the single gate oxide receiver to be a voltage level higher than the maximum voltage level of the input voltage.” Accordingly, Setty even if modified as suggested does not teach all the elements as arranged in the claims. Applicants request a showing of where Setty teaches “wherein the switchable voltage supply circuit selects the differential receiver supply voltage for the single gate oxide differential receiver to be a voltage level higher than a maximum voltage level of the input line.” Therefore, for at least these reasons, the Office Action fails to establish a *prima facie* case of obviousness

for the claims. As a result, the present rejection is improper and should be withdrawn. Reconsideration of the present rejection is requested.

Dependent Claims 8, 10, 14 through 16 and 18

Applicants repeat the above relevant marks regarding claims 1 and 4 and the relevant remarks from previous responses to Office Actions. In addition, Applicants also submit that these claims depend from the independent claims and provide further patentable subject matter in view thereof. Further, it is submitted that these claims are allowable, not merely as being dependent upon an allowable base claim, but rather as containing patentable subject matter in view of the prior art of record. Therefore, reconsideration and withdrawal of the present rejections is respectfully requested.

Applicants respectfully submit that the claims are in condition for allowance and respectfully request that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the below-listed attorney if the Examiner believes that a telephone conference will advance the prosecution of this application.

Respectfully submitted,

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